

THE OFFICE OF REGULATORY STAFF
DIRECT TESTIMONY AND EXHIBITS
OF
MICHAEL L. SEAMAN-HUYNH
AUGUST 17, 2010



DOCKET NO. 2010-3-E

**Annual Review of Base Rates for Fuel Costs
of Duke Energy Carolinas, LLC**

DIRECT TESTIMONY OF
MICHAEL L. SEAMAN-HUYNH
FOR
THE OFFICE OF REGULATORY STAFF
DOCKET NO. 2010-3-E
IN RE: ANNUAL REVIEW OF BASE RATES FOR FUEL COSTS OF
DUKE ENERGY CAROLINAS, LLC

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND OCCUPATION.

A. My name is Michael Seaman-Huynh. My business address is 1401 Main Street, Suite 900, Columbia, South Carolina 29201. I am employed by the State of South Carolina as an Electric Utilities Specialist in the Electric Department for the Office of Regulatory Staff ("ORS").

Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A. I received a Bachelor of Arts Degree in History from the University of South Carolina in Columbia in 1997. Prior to my employment with ORS, I was employed as an energy analyst with a private consulting firm. I joined ORS in June 2006. I have testified on several occasions before this Commission in conjunction with fuel clause proceedings.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to set forth ORS Electric Department's findings and recommendations resulting from our review of Duke Energy Carolinas, LLC's ("Duke" or "Company") fuel expenses and power plant operations used in the generation

1 of electricity to meet the Company's South Carolina retail customer requirements. The
2 review period includes actual data for June 2009 through May 2010, estimated data for
3 June 2010 through September 2010, and forecasted data for October 2010 through
4 September 2011.

5 **Q. WHAT AREAS WERE ENCOMPASSED IN YOUR EXAMINATION OF THE**
6 **COMPANY'S FUEL EXPENSES AND PLANT OPERATIONS?**

7 **A.** ORS examined various fuel and performance related documents as part of its
8 review. The information reviewed addressed various energy generation and power plant
9 maintenance activities. In preparation for this proceeding, ORS analyzed the Company's
10 monthly fuel reports including power plant performance data, unit outages and generation
11 statistics. ORS evaluated nuclear fuel, coal, natural gas, and transportation contracts and
12 the reagent related contracts for ammonia and limestone. ORS also evaluated the
13 Company's policies and procedures for fuel procurement. All information was reviewed
14 with reference to the Company's existing Adjustment for Fuel and Variable
15 Environmental Costs Rider and the Fuel Clause statute.

16 **Q. WHAT ADDITIONAL STEPS WERE TAKEN IN ORS'S REVIEW OF THE**
17 **COMPANY'S PROPOSAL IN THIS PROCEEDING?**

18 **A.** ORS met with various Duke personnel representing a variety of areas of expertise
19 to discuss and review Duke's fossil and nuclear fuel procurement, fuel transportation,
20 environmental reagents, emission allowances, purchasing procedures, nuclear, fossil and
21 hydro generation performance, plant dispatch, forecasting, resource planning, purchased
22 power, and general Company policies and procedures. These meetings occurred at Duke
23 headquarters in Charlotte, N.C. and the ORS offices in Columbia. In addition, on a daily

1 basis, ORS keeps abreast of the nuclear, coal, natural gas, and transportation industries
2 through industry and governmental publications. During the review period, ORS also
3 attended meetings held by the Nuclear Regulatory Commission ("NRC") on the
4 Company's Catawba, McGuire, and Oconee Nuclear Stations. During this review period,
5 ORS also conducted an on-site visit of the Allen and Cliffside Stations.

6 **Q. DID ORS EXAMINE THE COMPANY'S PLANT OPERATIONS FOR THE**
7 **REVIEW PERIOD?**

8 **A.** Yes. ORS reviewed the performance of the Company's generating facilities to
9 determine if the Company made reasonable efforts to minimize fuel costs. ORS also
10 reviewed the availability and capacity factors of the Company's power plants. Exhibit
11 MSH-1 shows the monthly availability factors of the Company's major generating units
12 stated in percentages. The corresponding capacity factors in Exhibit MSH-2 indicate the
13 monthly utilization of each unit in producing power.

14 **Q. PLEASE EXPLAIN THE SIGNIFICANCE OF PLANT AVAILABILITY AND**
15 **HOW IT IS USED IN ORS'S EVALUATION OF THE COMPANY'S PLANT**
16 **PERFORMANCE.**

17 **A.** Exhibits MSH-3 and MSH-4 show a summary of outages for the Company's
18 major fossil and nuclear units, respectively, during the review period. With reference to
19 Exhibit MSH-1, in months where generation units show zero or less than 100%
20 availability we examined the reasons for such occurrences. Exhibits MSH-1 through
21 MSH-4 are used in concert to evaluate the Company's plant operations. As an example,
22 Exhibit MSH-1 shows the Belews Creek Unit 2 had 0.00% availability in March and
23 April 2010. Exhibit MSH-3 indicates the reason for the 0.00% availability was the

1 planned maintenance outage between February 26, 2010 and May 16, 2010; therefore, the
2 unit was not available to generate electricity during this time frame due to its scheduled
3 Spring Maintenance Outage.

4 **Q. WOULD YOU EXPLAIN HOW THE OUTAGES ARE REPRESENTED ON**
5 **EXHIBITS MSH-3 AND MSH-4?**

6 **A.** Yes. Exhibit MSH-3 provides explanations for major fossil unit outages of 100
7 hours or greater. While not included in this Exhibit, all fossil outages of less than 100
8 hours were also reviewed and found to be reasonable by ORS. Exhibit MSH-4 provides
9 explanations for all nuclear plant outages during the review period.

10 **Q. PLEASE ADDRESS THE OUTAGES AT THE COMPANY'S THREE NUCLEAR**
11 **STATIONS.**

12 **A.** Exhibit MSH-4 shows the duration of the outages at the Company's three nuclear
13 stations, by unit, along with the explanation for each outage. ORS found that the
14 Company took appropriate corrective action with respect to these outages, and there were
15 no NRC fines associated with these outages. The seven nuclear units combined achieved
16 an overall 91.0% availability factor and 93.6% actual capacity factor for the review
17 period which includes scheduled refueling outages for five of the seven units.

18 **Q. WHAT WERE THE RESULTS OF YOUR ANALYSIS OF THE COMPANY'S**
19 **PLANT OPERATIONS FOR THE PERIOD UNDER REVIEW?**

20 **A.** ORS's review of the Company's operation of its generating facilities resulted in
21 the conclusion that the Company made reasonable efforts to maximize unit operations
22 and minimize fuel costs.

Q. DID ORS REVIEW THE GENERATION MIX AND BASE UNIT FUEL COSTS UTILIZED BY THE COMPANY DURING THE REVIEW PERIOD?

A. Yes. Exhibit MSH-5 shows the megawatt-hour (“MWH”) generation mix for the review period by generation type. The Company has no combined-cycle gas-fired generating units in its fleet and uses its simple-cycle combustion turbine units sparingly during peaking periods or when capacity is short and purchase opportunities are not economical. The Company’s load is met primarily through nuclear and coal generation along with a small amount of hydro production.

Q. DID ORS EXAMINE THE COMPANY’S FUEL COSTS ON A PLANT-BY-PLANT BASIS?

A. Yes. Exhibit MSH-6 shows the average fuel cost in cents per kilowatt-hour (“kWh”) and generation in MWHs for each of the Company’s baseload nuclear and coal-fired facilities. The Catawba Nuclear Station had the least expensive average fuel cost at 0.464 cents per kWh. The gas turbines at the Rockingham facility had the most expensive fuel cost at 4.738 cents per kWh. The highest total generation of 20,505,488 MWHs was produced at the Oconee Nuclear Station. The Company utilizes economic dispatch, which generally dispatches or brings on-line the lowest cost units first.

Q. HAS ORS REVIEWED THE ACCURACY OF THE COMPANY’S FORECAST?

A. Yes. As shown in Exhibit MSH-7, the Company’s actual megawatt-hour sales were 2.07% lower than forecasted sales during the review period. In addition, Exhibit MSH-8 shows the monthly variance between projected and actual fuel cost for the review period. This Exhibit demonstrates that the Company was able to improve its forecasted

costs during nine of the twelve months of the review period. Duke's actual fuel costs were 7.86% lower than projections for the review period.

Q. DID ORS REVIEW ADDITIONAL INFORMATION IN DETERMINING THE REASONABLENESS OF THE COMPANY'S FORECAST?

A. Yes. ORS reviewed the forecasted maintenance schedules for the Company's major generating units, the forecasted fuel price for nuclear and fossil, and the forecasted price for environmental reagents. ORS also reviewed the Company's load forecasting and dispatch procedures. Based on the review, ORS finds Duke's forecast to be reasonable and appropriate.

Q. WHAT OTHER INFORMATION HAS ORS REVIEWED IN MAKING ITS DETERMINATIONS IN THIS PROCEEDING?

A. Exhibit MSH-9 shows the ending balances of over and under collections of fuel costs beginning November 1979. The Company has experienced both over-recovery and under-recovery balances throughout the approximate thirty year period. The current over-recovered balance as of May 2010 is \$57,028,206.

Q. WHAT OTHER SOURCES DOES ORS USE IN DETERMINING THE REASONABLENESS OF THE COMPANY'S REQUEST?

A. ORS routinely 1) reviews private and public industry publications as well as those available on the Energy Information Administration's ("EIA") website; 2) conducts meetings with Company personnel; 3) attends industry conferences; and 4) reviews fuel information as filed monthly by electric generating utilities with the Federal Government. An example of EIA data reviewed is included on Exhibits MSH-10 and MSH-11. Exhibit MSH-10 provides spot coal price data for a three-year period and includes the

1 most recent spike and drop in prices experienced in 2008 for both Northern and Central
2 Appalachia. Duke generally obtains its coal from the Central Appalachia region. Exhibit
3 MSH-11 provides uranium price data for the previous fifteen-year period and shows a
4 significant increase in the price of uranium since 2006.

5 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

6 **A.** Yes, it does.

**Office of Regulatory Staff
Power Plant Performance Data Report
Availability Factors (Percentage)
Duke Energy Carolinas, LLC
Docket No. 2010-3-E**

HISTORICAL DATA						REVIEW PERIOD (ACTUAL) DATA												
PLANT	UNIT	MW RATING	YEAR 2007	YEAR 2008	YEAR 2009	JUN 2009	JUL 2009	AUG 2009	SEP 2009	OCT 2009	NOV 2009	DEC 2009	JAN 2010	FEB 2010	MAR 2010	APR 2010	MAY 2010	Average Review Pd.
CATAWBA	1 ¹	1129	99.7	86.2	89.1	100.0	100.0	100.0	100.0	100.0	19.1	50.6	100.0	78.5	99.1	100.0	99.9	87.3
CATAWBA	2 ²	1129	82.5	100.0	88.0	100.0	100.0	100.0	100.0	99.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
MCGUIRE	1	1100	78.4	83.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.1	100.0	39.1	32.2	99.4	89.2
MCGUIRE	2	1100	100.0	86.7	89.4	100.0	100.0	100.0	14.2	59.0	100.0	100.0	99.0	100.0	100.0	100.0	99.9	89.3
OCONEE	1	846	97.5	82.9	84.1	100.0	100.0	100.0	92.4	28.8	0.0	88.5	100.0	100.0	100.0	99.9	100.0	84.1
OCONEE	2	846	89.7	84.2	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.1	100.0	79.8	0.3	89.7
OCONEE	3	846	85.1	99.2	91.7	100.0	100.0	100.0	100.0	100.0	100.0	99.8	100.0	97.7	100.0	67.9	100.0	97.1
NUCLEAR TOT		6996	90.4	89.0	91.8	100.0	100.0	100.0	86.6	84.0	74.1	91.3	99.7	96.0	91.2	82.8	85.6	91.0
BELEWS CREEK	1	1110	73.2	90.1	82.3	89.2	95.0	100.0	99.4	100.0	89.3	96.6	99.7	85.7	99.2	67.4	99.4	93.4
BELEWS CREEK	2	1110	91.9	86.4	89.7	93.6	100.0	94.6	90.5	91.1	98.3	90.0	99.3	67.8	0.0	0.0	40.5	72.1
CLIFFSIDE	5	562	84.5	91.6	91.4	95.9	98.7	99.9	99.2	91.9	98.0	100.0	99.9	62.0	0.0	0.0	0.3	70.5
MARSHALL	1	380	84.4	84.4	84.4	96.6	79.6	81.2	86.2	89.2	95.9	86.9	92.0	80.4	99.2	53.8	88.5	85.8
MARSHALL	2	380	87.9	87.9	87.9	97.1	80.0	81.5	82.0	86.7	95.8	96.4	90.7	91.8	88.2	52.6	81.3	85.3
MARSHALL	3	658	87.1	71.7	88.9	73.6	100.0	99.8	59.4	75.3	92.7	100.0	99.5	88.1	72.3	99.9	99.0	88.3
MARSHALL	4	660	91.9	82.6	89.7	100.0	99.3	100.0	80.9	86.8	95.5	99.8	99.5	92.8	99.3	99.9	51.6	92.1
FOSSIL TOTALS		4860	85.8	84.9	87.7	92.3	93.2	93.8	85.4	88.7	95.1	95.7	97.2	81.2	65.5	53.4	65.8	83.9

¹ Catawba Unit 1 Ownership: North Carolina Electric Membership Corp. (~61.51%) and Duke Power (~38.49%)

² Catawba Unit 2 Ownership: North Carolina Municipal Power Agency No. 1 (75%) and Piedmont Municipal Power Agency (25%)

**Office of Regulatory Staff
Power Plant Performance Data Report
Capacity Factors (Percentage)
Duke Energy Carolinas, LLC
Docket No. 2010-3-E**

HISTORICAL DATA							REVIEW PERIOD (ACTUAL) DATA													
PLANT	UNIT	MW RATING	LIFE ¹ TIME	YEAR 2007	YEAR 2008	YEAR 2009	JUN 2009	JUL 2009	AUG 2009	SEP 2009	OCT 2009	NOV 2009	DEC 2009	JAN 2010	FEB 2010	MAR 2010	APR 2010	MAY 2010	Average Review Pd	
CATAWBA	1	1129	83.1	101.9	95.0	91.0	101.4	101.6	101.2	101.7	102.1	18.3	51.5	103.7	80.8	102.5	102.9	101.9	89.1	
CATAWBA	2	1129	84.5	84.4	102.9	90.1	102.2	102.0	101.8	102.3	102.7	102.9	103.3	103.6	103.7	103.6	102.9	102.1	102.8	
MCGUIRE	1	1100	77.2	79.6	86.5	103.8	103.1	102.0	101.3	101.8	103.5	104.2	104.7	103.8	104.8	40.5	32.9	104.6	92.3	
MCGUIRE	2	1100	83.5	103.5	90.2	93.5	103.8	102.7	99.5	12.2	66.6	105.3	105.5	104.5	105.5	105.4	104.7	103.7	93.3	
OCONEE	1	846	76.3	98.8	83.8	85.3	101.3	100.5	99.5	91.9	28.7	0.0	90.2	102.7	102.7	102.7	102.2	102.0	85.4	
OCONEE	2	846	79.2	91.4	85.9	102.7	103.0	102.0	100.9	100.6	101.8	101.6	102.7	103.2	99.1	103.2	82.1	0.0	91.7	
OCONEE	3	846	78.7	87.2	101.9	94.1	102.7	102.3	101.3	100.4	102.4	103.1	103.4	103.8	101.1	103.9	69.4	103.7	99.8	
NUCLEAR TOT		6996	80.4	92.4	92.6	94.4	102.5	101.9	100.8	86.3	87.9	77.2	93.9	103.7	99.5	93.6	85.5	90.5	93.6	
BELEWS CREEK	1	1110	n/a	66.7	84.9	73.8	58.5	84.2	92.9	91.5	91.8	82.4	90.2	93.8	85.5	95.7	62.9	97.9	85.6	
BELEWS CREEK	2	1110	n/a	84.4	80.1	77.0	76.2	85.9	81.3	72.7	76.3	84.4	76.7	85.1	57.4	0.0	0.0	30.8	60.6	
CLIFFSIDE	5	562	n/a	71.7	78.3	65.4	72.2	75.4	82.2	73.4	56.5	66.0	77.1	83.4	55.5	0.0	0.0	0.0	53.5	
MARSHALL	1	380	n/a	73.8	73.8	73.8	62.8	48.9	59.6	54.5	23.7	63.9	60.4	66.3	63.9	75.0	44.8	75.1	58.2	
MARSHALL	2	380	n/a	76.5	76.5	76.5	56.1	44.8	58.6	42.0	13.5	54.2	74.0	60.7	81.1	69.1	44.3	67.7	55.5	
MARSHALL	3	658	n/a	80.6	66.0	82.6	65.5	93.9	91.7	50.5	69.0	84.9	94.6	91.8	84.3	63.5	94.5	91.9	81.3	
MARSHALL	4	660	n/a	86.8	75.8	79.0	84.5	87.9	90.6	67.7	79.3	90.3	94.6	92.2	89.6	91.0	94.1	47.7	84.1	
FOSSIL TOT		4860	n/a	77.3	77.7	75.7	59.5	72.2	74.0	62.0	65.0	69.5	72.7	75.4	62.7	42.8	39.9	48.3	62.0	

¹The lifetime nuclear unit capacity factors are through December 2009

**Office of Regulatory Staff
Fossil Unit Outage Report
(100 Hrs or Greater Duration)
Duke Energy Carolinas, LLC
Docket No. 2010-3-E**

UNIT	DATE OFF	DATE ON	HOURS	TYPE	EXPLANATION OF OUTAGE
Belews Creek - 1	4/10/10	4/18/10	199.1	Planned	Unit was taken offline for scheduled Spring Outage
Belews Creek - 2	2/26/10	5/16/10	1,894.1	Planned	Unit was taken offline for scheduled Spring Outage
Cliffside - 5	2/19/10	6/10/10 ¹	2,655.9	Planned	Unit was taken offline for scheduled Spring Outage
Marshall - 1	4/17/10	5/2/10	365.3	Planned	Unit was taken offline for scheduled Spring Outage
Marshall - 2	4/16/10	5/2/10	379.3	Planned	Unit was taken offline for scheduled Spring Outage
Marshall - 3	9/18/09	10/5/09	391.8	Planned	Unit was taken offline for scheduled Fall Outage
Marshall - 3	3/21/10	3/27/10	152.4	Forced	Unit was forced offline due to a tube leak
Marshall - 4	9/10/09	9/15/09	113.2	Forced	Unit was forced offline due to a tube leak
Marshall - 4	10/28/09	11/2/09	125.2	Forced	Unit was forced offline due to a tube leak
Marshall - 4	5/15/10	5/29/10	351.2	Planned	Unit was taken offline for scheduled Spring Outage

¹ This outage ended after the conclusion of the Review Period.

**Office of Regulatory Staff
Nuclear Unit Outage Report
Duke Energy Carolinas, LLC
Docket No. 2010-3-E**

UNIT	DATE OFF	DATE ON	HOURS	TYPE	EXPLANATION OF OUTAGE
Catawba - 1	11/6/09	12/15/09	924.7	Planned	Unit was taken offline for scheduled refueling outage and various maintenance work
Catawba - 1	2/18/10	2/23/10	130.7	Forced	Unit was forced offline due to reactor coolant leak
McGuire - 1	3/13/10	4/19/10	901.2	Planned	Unit was taken offline for scheduled refueling outage and various maintenance work
McGuire - 2	9/5/09	10/9/09	852.5	Planned	Unit was taken offline for scheduled refueling outage and various maintenance work
Oconee - 1	9/2/09	9/3/09	41.0	Maintenance	Unit was taken offline to repair a feed water control valve
Oconee - 1	10/10/09	12/4/09	1,325.7	Planned	Unit was taken offline for scheduled refueling outage and various maintenance work
Oconee - 2	4/25/10	5/30/10	840.6	Planned	Unit was taken offline for scheduled refueling outage and various maintenance work
Oconee - 2	5/30/10	6/3/10 ¹	84.0	Forced	Unit was forced offline due to reactor coolant system pressure control issues
Oconee - 3	4/18/10	4/26/10	200.2	Forced	Unit was forced offline due to a feedwater tube leak

¹ This outage ended after the conclusion of the Review Period.

**Office of Regulatory Staff
Generation Mix Report (June 2009 – May 2010)
Duke Energy Carolinas, LLC
Docket No. 2010-3-E**

<u>MONTH</u>	<u>PERCENTAGE</u>			<u>PURCHASED POWER</u>
	<u>FOSSIL</u>	<u>NUCLEAR</u>	<u>HYDRO</u>	
2009				
June	36.6	57.8	1.6	4.0
July	37.3	58.3	0.1	4.3
August	40.5	55.6	0.0	3.9
September	34.0	53.8	0.9	11.3
October	32.2	60.1	0.7	7.0
November	40.4	55.9	2.9	0.8
December	40.3	54.9	3.2	1.6
2010				
January	40.4	54.8	2.8	2.0
February	39.8	54.5	3.5	2.2
March	31.4	59.4	2.4	6.8
April	31.6	58.1	1.9	8.4
May	37.7	56.3	0.9	5.1
Average	36.8	56.6	1.8	4.8

**Office of Regulatory Staff
Generation Statistics for Major Plants
(June 2009 – May 2010)
Duke Energy Carolinas, LLC
Docket No. 2010-3-E**

PLANT	TYPE FUEL	AVERAGE FUEL COST¹ (CENTS/KWH)	GENERATION (MWH)
Catawba	Nuclear	0.464	18,990,671
McGuire	Nuclear	0.469	17,879,238
Oconee	Nuclear	0.501	20,505,488
Marshall	Coal	3.041	13,132,939
Cliffside	Coal	3.506	2,682,636
Belews Creek	Coal	3.682	14,212,305
Riverbend	Coal/Natural Gas	3.822	868,263
Allen	Coal	3.869	4,549,807
Lee	Coal	3.897	728,333
Dan River	Coal/Natural Gas	4.316	303,003
Buck	Coal/Natural Gas	4.348	718,929
Rockingham	Natural Gas	4.738	155,421

¹ The average fuel costs for coal-fired plants include oil and/or gas cost for start-up and flame stabilization.

Office of Regulatory Staff
SC Retail Comparison of Estimated to Actual Energy Sales
Duke Energy Carolinas, LLC
Docket No. 2010-3-E

	2009	JUN	JUL	AUG	SEP	OCT	NOV	DEC	2010	JAN	FEB	MAR	APR	MAY	TOTAL
[1] ESTIMATED SALES [MWH]	1,800,428	1,915,141	2,037,537	1,967,114	1,607,910	1,587,278	1,709,383	1,787,499	1,756,108	1,573,641	1,586,646	1,576,242	1,586,646	1,576,242	20,904,927
[2] ACTUAL SALES [MWH]	1,729,945	1,880,043	1,911,611	1,792,320	1,543,698	1,463,698	1,664,530	1,927,383	1,749,818	1,697,366	1,611,533	1,508,902	1,611,533	1,508,902	20,480,848
[3] AMOUNT DIFFERENCE [1]-[2]	70,483	35,098	125,926	174,794	64,212	123,580	44,853	-139,884	6,290	-123,725	-24,887	67,340	-24,887	67,340	424,079
[4] PERCENT DIFFERENCE [3]/[2]	4.07%	1.87%	6.59%	9.75%	4.16%	8.44%	2.69%	-7.26%	0.36%	-7.29%	-1.54%	4.46%	-1.54%	4.46%	2.07%

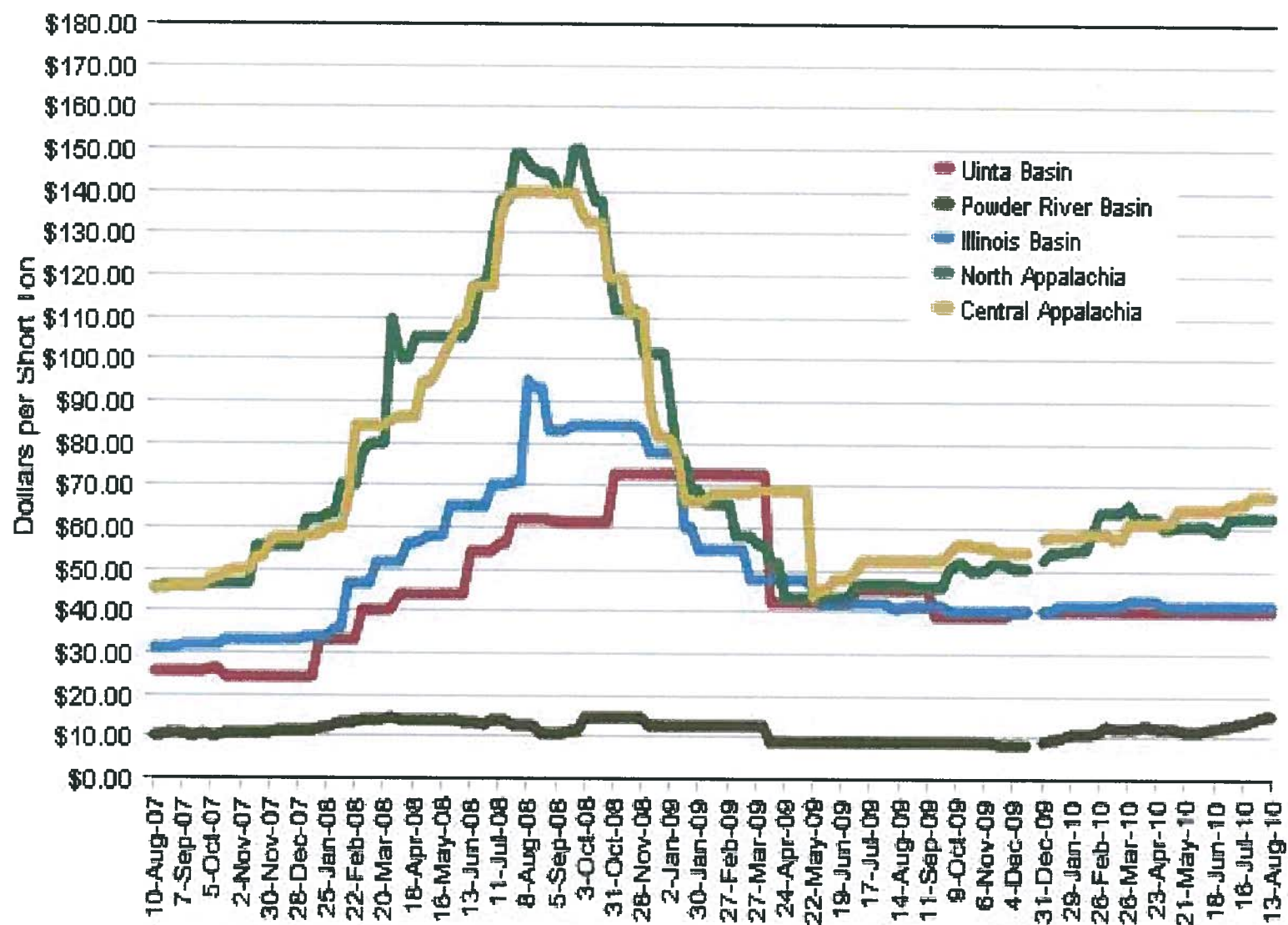
Office of Regulatory Staff
SC Retail Comparison of Estimated to Actual Fuel Cost
Duke Energy Carolinas, LLC
Docket No. 2010-3-E

	2009	2010												PERIOD
	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	AVERAGE	
[1] ORIGINAL PROJECTION (¢/kWh)	2.1269	2.1781	2.2619	2.5201	2.2846	2.1614	2.0062	1.9639	2.1981	2.0286	2.1752	2.1475	2.1710	
[2] ACTUAL EXPERIENCE (¢/kWh)	2.1553	1.9735	2.2010	1.8754	1.9127	2.0995	1.8387	2.0333	2.0575	1.7459	1.7827	2.4782	2.0128	
[3] AMOUNT IN BASE (¢/kWh)	2.2317	2.2317	2.2317	2.2317	1.9606	1.9606	1.9606	1.9606	1.9606	1.9606	1.9606	1.9606	2.0510	
[4] VARIANCE FROM ACTUAL [1-2]/[2]	-1.32%	10.37%	2.77%	34.38%	19.44%	2.95%	9.11%	-3.41%	6.83%	16.19%	22.02%	-13.34%	7.86%	

**Office of Regulatory Staff
History of Cumulative Recovery Account Report
Duke Energy Carolinas, LLC
Docket No. 2010-3-E**

<u>PERIOD ENDING</u>	<u>OVER (UNDER)\$</u>
May 1979 - Automatic Fuel Adjustment in Effect	
November-79	1,398,442
May-80	11,322,948
November-80	4,588,331
May-81	(5,760,983)
November-81	(13,061,000)
May-82	(14,533,577)
November-82	(4,314,612)
May-83	20,915,390
November-83	14,192,297
May-84	18,245,503
November-84	14,478,363
May-85	2,551,115
November-85	(553,465)
May-86	(1,318,767)
November-86	(29,609,992)
May-87	(27,241,846)
November-87	(29,329,168)
May-88	(9,373,768)
November-88	6,544,914
May-89	6,067,739
November-89	11,372,399
May-90	15,421,968
November-90	2,939,303
May-91	17,068,483
November-91	21,265,000
May-92	21,080,856
November-92	11,553,801
May-93	16,959,555
November-93	221,606
May-94	6,609,897
November-94	1,037,659
May-95	5,088,619
November-95	(377,507)
March-97	(13,299,613)
March-98	(1,956,794)
March-99	13,044,443
March-00	26,703,441
March-01	20,367,528
March-02	(7,446,417)
March-03	(1,121,094)
March-04	11,424,295
June-05	(2,669,646)
June-06	6,984,672
June-07	1,632,482
May-08	(12,225,796)
May-09	47,830,080
May-10	57,028,206

EIA Average Weekly Coal Commodity Spot Prices
Business Week Ended August 13, 2010



EIA Weighted-Average Price of U.S. and Foreign-Origin Uranium Purchased by Owners and Operators of U.S. Civilian Nuclear Power Reactors, 1994-2008 Deliveries

